Role of Social, Cultural and Economic Capitals in Perceived Quality of Life Among Old Age People in Kerala, India

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ABSTRACT

Objective: To find out the relationship of collective social, economic, and cultural properties of a population on the perceived quality of life (QOL) among old age people.

Materials and Methods: In a community-based cross-sectional study, we analyzed information on a representative sample of 900 old age (aged > 60 years) from 28 villages in Kollam district of Kerala. "WHO-Quality of Life - BREF questionnaire" was used. Ethical clearance from Institutional Ethics Committee was obtained. The mean scores for "perceived" QOL for domains such as physical health, psychological health, social relations, and control of environments were calculated. The three scales (social capital, cultural capital, and economic capital) were standardized using *z*-score transformation to make them comparable. Using multiple linear regression, we calculated the independent effect of economic capital, social capital, and cultural capital on perceived QOL among old people adjusted for age, sex, and the presence of chronic disease.

Results: For overall QOL, only cultural capital contributed significantly. An increase of one unit *z*-score cultural capital led to three units increase in overall QOL score (β = 3.362; 95% CI: 2.645-4.078). Social capital and cultural capital contributed significantly to the physical health domain of QOL. With one *z*-score increase in social capital and cultural capital, QOL score of physical health domain increased by 0.2 units (β = 0. 227; 95% CI: 0.020-0.434), and 0.5 (β = 0. 596; 95% CI: 0.384-0.808) units, respectively. Psychological health domain and environmental domain were affected by all three capitals significantly. But, the social relations domain was significantly affected only by cultural capital (β = 0. 576; 95% CI: 0.373-0.779).

Conclusion: Hence, the policies for old people should envision retaining our cultural and social norms along with the economic interventions for a better palliative care.

Key words: Cultural, Capitals, Economic, India, Old age, Social

INTRODUCTION

In India, old age people (aged ≥ 60 years) accounted for 7.4% of the population (10.5% in Kerala) in 2001. It is projected to rise from 5.6% of the population in 1961 to 12.4% by 2026. The national policies and programs for the old age people in India aim at their welfare and maintenance, especially for indigent senior citizens, by supporting old-age homes, day care centers, mobile medical care units, etc.[1]

In traditional Indian culture and social arrangements, elders are respected and obeyed in their household, neighborhood, and community. However, in recent times, this arrangement is seen to be slowly deteriorating in both urban and rural settings.[2] Research in Western

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countries has shown that social support contributes to the perceived well-being of the old age people and protects them from various mental health problems.[3,4] McMichael has argued that social, cultural, and economic structures in the community affect the population's health.[5] Capital is a potential capacity to produce profits. Its distribution structure in the society, which represents the inherent governance of constraints and opportunities, decides the chances of one's success and failure in life. Bourdeiu argues that there are three fundamental forms of capitals, namely, economic, cultural, and social. Economic capital can be expressed in the form of property rights and economic sovereignty. Cultural capital can be expressed in the form of non-financial social asset that produces social alchemy such as education. Social capital can be expressed in the form of one's social network and trust.[6]

Studies in India have reported the effect of "proximate social determinants" on the quality of elderly life,[7,8] but not much is known about the effect of broad "distal determinants" such as collective social, cultural, and economic characteristics of the Indian community on perceived quality of life (QOL) of the old age people. Such information is crucial for planning social interventions that target to retain old-age friendly social and cultural norms. Hence, the present study was performed to find out the relationship of collective social, economic, and cultural properties of the population on the perceived QOL among old age people.

MATERIALS AND METHODS

Setting and background

The present study was carried out in 28 villages in Kollam (16 villages) and Alappuzha (12 villages) districts of Kerala state, where the Institute of Palliative Medicine, Calicut, is implementing community-based palliative care program in 16 villages of Kollam district. The population of the 16 villages in Kollam district (study area) was 83,272 and that of the 12 villages in Alappuzha district (control area) was 78701. The objective of the study was to compare the perceived QOL score among old age people in the aforementioned study and in the control area.

Sample size and sampling design

A sample size of 450 was calculated for study and control area each to detect the mean difference of 0.6 in perceived QOL score, precision of 5%, power of 80%, and design effect of two.[5] In the first stage, 30 clusters were selected by probability proportional to size technique from the study and the control area each. The unit of cluster was a village. In the second stage, 15 old age (aged > 60 years) people were selected by systematic random sampling from each of the selected cluster. For each cluster thus selected, a sampling frame was generated by enumerating all the households in the cluster. First household was selected randomly (r), and subsequently next houses were selected by adding (K = number of household/15, where $1 \leq r \leq K$) interval in random number until the desired sample of 15 was achieved. If the selected house did not have any old person or if the house was locked, the immediate next house in the direction of movement was selected for the interview. If there were more than one old person in the house, a lottery method was used to select one.

Tools and definitions

"WHO-Quality of Life - BREF questionnaire" was used to find out QOL, which was translated in local language *Malayalam*, and it was pre-tested in field before survey.[9] This is an international cross-culturally comparable QOL assessment instrument. It assesses the individual's perceptions in the context of their culture and value systems, and their personal goals, standards, and concerns. The WHO-Quality of Life - BREF instruments were developed collaboratively in a number of countries worldwide, including India, and have been widely field-tested. WHO-Quality of Life - BREF instrument comprises 26 items and allows detailed assessment of four domains of QOL-physical health, psychological support, social relationships, and environment. It was developed considering different age groups, sex, and health conditions. It can be used in epidemiological studies for assessment of QOL, establishing baseline scores in a range of areas, looking at changes in QOL over the course of interventions. The physical health domain includes facets of pain, energy, mobility, activities, medication, and work. Facets of psychological domain include positive and negative feelings, thinking, self-esteem, and body image. Facets assessed for social relationships were personal relationships, social support, and activities as provider and/or supporter. To assess environment, facets used were physical safety/security, home environment, work satisfaction, financial resources, health and social care, and physical environment. We obtained permission from the World Health Organization to use this questionnaire for the present research study.

Economic capital was calculated based on whether the old person was from a family above the poverty level (assessed for the type of ration card issued by the government), whether she/he was a beneficiary of pension scheme, and

whether she/he had coverage of health insurance. Each of the attributes was given a score of "1" on the positive response and the score of "0" on the negative response. The scores were added up to quantify the economic capital, and it ranged from 0-3. Similarly, for social capital, it was calculated on the basis of self-help-group membership and membership of religious groups. Social capital ranged from 0 to 2. Cultural capital was calculated based on whether the old person belonged to joint family, whether she/he was currently married, and whether she/he was literate. The cultural capital ranged from 0 to 3. We took the reference of Bourdieu to decide the various forms of capital, where it was seen as accumulated labor, and its effects.[6]

Training of interviewers and data collection

After obtaining informed consent, a team of trained interviewers interviewed a representative sample of old age people by conducting house to house visits. The interviewers included 10 students of Masters in Social Work and the 4 supervisors of teaching faculties from a local college of Social Work. All of them were trained in communication skills required for administration of questionnaire and ethical issues in a two-day-long residential training program. Training was followed by hands-on experience. Interviewers were asked to interview at least two old people and fill-up WHOQOL-BREF questionnaires. They were asked to obtain the consent and administer the questionnaire. It was followed by feedback and group discussion to address the queries emerged during the hands-on experience. The interviews were conducted in October 2011.

Data entry and analysis

We used SPSS 12.0.1 software (SPSS Inc., Chicago, Illinois, USA) package to analyze the data. We used WHOQOL syntax for calculation of mean values of four domains of QOL. Here, we pooled the data from both the areas (study area and control area), giving us the total sample size of 900.

The mean scores for "perceived" QOL for domains such as physical health, psychological health, social relations, and control of environments were calculated. The three scales (social capital, cultural capital, and economic capital) were standardized using z-score transformation to make them comparable. Interaction terms were created by multiplying the z-scores of the variables and then subtracting its mean so that the interaction term does not remain collinear with the original variables. We did not find a significant interaction of different combinations of social, economic, and cultural capitals with QOL. Using multiple linear regression, we calculated the independent effect of each of economic capital, social capital, and cultural capital on perceived QOL among old people adjusted for age, sex, and the presence of chronic disease.

Ethical clearance from the Institutional Review Board of Sri Manakula Vinayagar Medical College and Hospital, Pondicherry, was obtained.

RESULTS

Of the 900 old people studied, complete data were available for 888 subjects (98.6%), of which 42.3% were male and 84% had chronic morbidity. Among males, mean QOL score was 52.02 (95% CI: 49.86-51.03), among females it was 49.28 (95% CI: 48.54-50.02). The mean QOL score among males was significantly higher than among females. Mean QOL scores for all the four domains (physical health, psychological health, social relations, and environment) were higher among males than among females. The differences were statistically significant for all the domains except for the social relations domain [Table 1]. Mean QOL among those who had at least one chronic morbidity (49.66; 95%CI: 49.03-50.29) was significantly lower than those who did not have any chronic morbidity (54.58; 95%CI: 53.28-55.88). This was true for all the four domains of QOL [Table 2].

Table 3 shows inequalities in different forms of capitals between the two sexes. In all, 22.4% of males were poor as compared with 22.3% of females in economic capital. Similarly, 4.0% and 4.1% of males and females, respectively, were richest in economic capital. The distribution of economic capital did not differ significantly between the two sexes. Among social capital, 47.2% males and 41.2% females were poorer, and 2.4% males and 5.7% females were richer. The distribution of social capital was significantly different between the two sexes, favoring males. For cultural capital, 2.7% males were poor versus12.1% females, whereas 29.9% males were rich versus 11.5% females. The distribution of cultural capital significantly favored males.

The association of different forms of capitals with the mean QOL scores is presented in Table 3. For economic capital, the mean QOL score was least (48.35; 95% CI: 45.80-50.90) among those who were poorest [does not belong to above poverty line (APL), does not have a pension, and does not have health insurance]. It increased to 48.97 (47.91-50.04) for those who had at least one of the elements of economic capital. It further increased to 50.41 (49.52-51.32) and 52.62 (51.48-53.76) among

Table 1: Mean scores of quality of life by sex

Sex	*N* (%)	Mean scores of quality of life (95% confidence interval)				
		Physical health domain	Psychological health domain	Social relations domain	Environmental domain	Overall
Overall	888 (100)	12.55 (12.37-12.73)	12.24 (12.05-12.42)	13.24 (13.03-13.46)	12.41 (12.24-12.59)	50.44 (49.86-51.03)
Males	375 (42.3)	13.10 (12.82-13.37)	12.56 (12.29-12.83)	13.81 (13.48-14.14)	12.56 (12.29-12.83)	52.02 (51.11-52.94)
Females	513 (57.7)	12.15 (11.92-12.38)	11.99 (11.76-12.24)	12.83 (12.55-13.11)	12.30 (12.07-12.54)	49.28 (48.54-50.02)
P value		<0.001	0.002	<0.001	0.153	<0.001

Table 2: Chronic morbidity and quality of life (*N*=888)

Chonic morbidity	*N* (%)	Mean scores of quality of life (95% confidence interval)				
		Physical health domain	Psychological health domain	Social relations domain	Environmental domain	Overall
Present	746 (84.0)	12.23 (12.05-12.41)	12.06 (11.88-12.24)	13.08 (12.84-13.32)	12.28 (12.09-12.47)	49.66 (49.03-50.29)
Absent	142 (16.0)	14.23 (13.91-14.61)	13.17 (12.8-13.54)	14.09 (13.58-14.60)	13.09 (12.67-13.51)	54.58 (53.28-55.88)
P value		<0.001	<0.001	0.001	0.001	<0.001

Table 3: Inequalities in different capitals by sex and in QOL by forms of capitals

Capital	Sex (%)		Total	*P* value	Quality of life (95% CI)	*P* value
	Male	Female				
Economic						
0 (poorest)	84 (22.4)	114 (22.3)	198 (22.3)	0.985	48.35 (45.80-50.90)	<0.001
1	179 (47.7)	239 (46.6)	418 (47.1)		48.97 (47.91-50.04)	
2	97 (25.9)	138 (27.0)	235 (26.5)		50.41 (49.52-51.32)	
3 (richest)	16 (4.0)	21 (4.1)	37 (4.1)		52.62 (51.48-53.76)	
Social						
0 (poorest)	177 (47.2)	211 (41.2)	388 (43.7)	0.024	49.34 (48.45-50.25)	0.004
1	189 (50.4)	272 (53.1)	461 (52.0)		51.26 (50.47-52.06)	
2 (richest)	10 (2.4)	29 (5.7)	39 (4.3)		51.79 (49.33-54.26)	
Cultural						
0 (poorest)	10 (2.7)	62 (12.1)	72 (8.1)	<0.001	45.45 (43.86-47.04)	<0.001
1	65 (17.3)	188 (36.7)	253 (28.5)		48.73 (47.68-49.79)	
2	188 (50.1)	203 (39.6)	391 (44.1)		51.28 (50.40-52.17)	
3 (richest)	113 (29.9)	59 (11.5)	172 (19.3)		53.17 (51.88-54.47)	

CI: Confidence interval, QOL: Quality of life

those any two or all three elements of economic capital, respectively. The difference in mean scores was statistically significant. Similar results were observed for social capital and cultural capital. Those who had the highest number of elements of a capital (i.e. one who was rich) had significantly higher mean QOL score.

Multiple linear regression analysis was carried out to find out the independent effect of age, sex, presence of chronic morbidity, and each of the three capitals studied and their interactions on QOL score. Age and sex were significantly associated with QOL score. Presence of at least one chronic morbidity was adversely associated with physical health domain only (β = -0.984; 95% CI: −1.534 to −0.435). For overall QOL, only cultural capital contributed significantly. One z-score increase in cultural capital led to three units increase in overall QOL score (β =3.362; 95% CI: 2.645-4.078). Social capital and cultural capital contributed significantly to the physical health domain of QOL. With one z-score increase in social capital and cultural capital, QOL score of physical health domain increased by 0.2 units (β = 0. 227; 95%CI: 0.020-0.434) and 0.5 (β = 0. 596; 95% CI: 0.384-0.808) units, respectively. Psychological health domain and environmental domain were affected by all three capitals significantly. But, the social relations domain was significantly affected only by cultural capital (β = 0. 576; 95%CI: 0.373-0.779). The interactions among the different forms of capitals did not contribute significantly to any of the models [Table 4].

DISCUSSION

Mean QOL scores for all the four domains (physical health, psychological health, social relations, and

Table 4: Determinants of quality of life-multiple linear regression analysis

Variables	Overall quality of life		Physical health domain		Psychological health domain		Social relations domain		Environmental domain	
	β (95% CI)	*P* value	β (95% CI)	*P* value	β (95% CI)	*P* value	β (95% CI)	*P* value	β (95% CI)	*P* value
Age	0.640 (0.604-0.676)	<0.001	0.174 (0.164-0.185)	<0.001	0.160 (0.150-0.170)	<0.001	0.153 (0.141-0.166)	<0.001	0.153 (0.142-0.163)	<0.001
Sex	3.789 (2.431-5.146)	<0.001	0.659 (0.257-1.061)	0.001	0.745 (0.362-1.128)	<0.001	1.362 (0.902-1.822)	<0.001	1.022 (0.638-1.406)	<0.001
Presence of chronic morbidity	−1.007 (−2.863-0.849)	0.287	−0.984 (−1.534- −0.435)	<0.001	−0.260 (−0.784-0.263)	0.329	0.225 (−0.403-0.854)	0.482	0.012 (−0.513-0.538)	0.963
Economic capital	0.668 (−0.027-1.363)	0.060	0.146 (−0.060- −0.352)	0.164	0.290 (0.194-0.486)	0.004	0.027 (−0.009-0.263)	0.822	0.258 (0.062-0.455)	0.010
Social capital	0.558 (−0.139-1.256)	0.117	0.227 (0.020-0.434)	0.031	0.323 (0.126-0.520)	0.001	−0.200 (−0.437-0.036)	0.096	0.209 (0.011-0.406)	0.038
Cultural capital	3.362 (2.645-4.078)	<0.001	0.596 (0.384-0.808)	<0.001	0.635 (0.433-0.838)	<0.001	1.554 (1.311-1.797)	<0.001	0.576 (0.373-0.779)	<0.001
Interaction 1	−0.282 (−0.974-0.409)	0.423	−0.090 (−0.295-0.115)	0.390	0.002 (−0.193-0.197)	0.984	−0.215 (−0.449-0.020)	0.072	0.020 (−0.176-0.216)	0.840
Interaction 2	0.255 (−0.420-0.931)	0.458	0.047 (−0.153-0.247)	0.646	0.058 (−0.132-0.249)	0.550	0.003 (−0.226-0.232)	0.979	0.147 (−0.044-0.339)	0.130
Interaction 3	0.369 (−0.320-1.059)	0.294	0.132 (−0.730-0.336)	0.487	0.023 (−0.172-0.217)	0.818	0.180 (−0.053-0.414)	0.130	0.034 (−0.161-0.230)	0.729
Interaction 4	0.340 (−0.368-1.047)	0.346	0.074 (−0.135-0.284)	0.206	0.190 (−0.009-0.390)	0.061	0.006 (−0.233-0.246)	0.959	0.069 (−0.131-0.269)	0.500
R^2	0.960		0.944		0.947		0.935		0.948	

Interaction 1: Interaction between economic capital, social capital, and cultural capital; Interaction 2: Interaction between economic capital and social capital; Interaction 3: Interaction between social capital and cultural capital; Interaction 4: Interaction between economic capital and cultural capital. CI: Confidence interval

environment) were higher among males than among females. Mean QOL among those who had at least one of the chronic morbidity was significantly lower than those who did not have any chronic morbidity. In a bivariate analysis, the perceived QOL was found to improve with the rise in social capital, cultural capital, and economic capital. In multiple regression analysis, cultural capital contributed significantly to the overall QOL. Social capital and cultural capital contributed significantly to the physical health domain of QOL. Psychological health domain and environmental domain were significantly affected by all the three capitals. But, the social relations domain was significantly affected only by the cultural capital.

We found that old men perceive better QOL than old women. It was due to inequality of distribution of social capital and cultural capital between male and female sex, favoring males. It is noteworthy that cultural capital contributed significantly to the overall QOL. In the present study, we found that the presence of at least one of the chronic morbidities adversely affected the perceived QOL among old people. In a similar research in rural Tamil Nadu, the presence of chronic morbidities among old people was found to significantly affect physical, psychological, and environmental domains of QOL. Joshi *et al.* reported that age, sex, and occupations are the determinants of morbidity among old age people and that those with higher morbidity had increasing disability and distress.[10] Hence, the policies and programs for old people need to be pro-women and should focus on strategies for the reduction of risk factors or prevention of chronic morbidities among old age people for ensuring better QOL.

Interestingly, the only determinant found for the overall perceived QOL and perceived social relation among old age people was the cultural capital. India has a rich religious and cultural heritage with well established protective family system. This traditional family system has in-built mechanism of obedience, intimacy, and respect for elders. Traditionally, elders are respected in their joint family, neighbourhood, and local community, and are actively involved in religious and cultural festivals at household and community levels.[2] The setup of traditional joint families is gradually breaking into nuclear families because of urbanization and industrialization. However, studies have shown that old parents in India are adjusting to the changed values and prefer to stay with their married children rather than being left in their ancestral home in their village. The younger generation is making efforts to see that their parents are able to stay with them.[2]

The perceived physical health was determined by social capital and cultural capital in the local community. Berkman found that for social support to be health promoting, it must provide both a sense of belonging and an intimacy between elders and their family and local community.[11] Notably, such active and socially integrated lifestyle in late life has been found to protect against mental health problems such as dementia and Alzheimer's disease.[4] A randomized controlled trial on social intervention among old age people showed a significant improvement in self-perceived health status among social intervention group.[3]

The perceived psychological health and environment was determined by all three capitals-social, cultural, and economic. National Policy on Senior Citizens, 2011, in India,

envisions strengthening the capacity of family through economic measures such as pension, travel concessions, income tax relief, medical benefit, and extra interest on savings.[12] However, policy should also incorporate explicit prescriptions to support caregivers in retaining existing social and cultural practices, which were found to play a key role in perceived QOL among old age people. The policy rightly aims at prevention than cure and encourages aging in one's own home - "Aging in place" - and considers institutional care as the last resort.[12] The National Program for the Health Care of the Elderly envisions to provide accessible, affordable, and high-quality, long-term, comprehensive, and dedicated care services to an aging population through community-based primary care approach, referral support, and trained health care professionals. The scope of this program can be further expanded to support the families of caregivers and restore the traditional old age friendly cultural and social practices in India.[13]

The findings of the present study should be seen in the light of one limitation that the scope of the definitions of the capitals used was a little narrow, as we had used the already collected data for the analysis in the present study.

In conclusion, we found better perceived QOL among men, as they had better social capital and cultural capital, and cultural capital was the only single determinant for overall perceived QOL**.** Social capital and cultural capital contributed significantly to the physical health domain of QOL. Psychological health domain and environmental domain were significantly affected by all the three capitals. Hence, the policies for old age people should envision retaining our cultural and social norms along with the economic interventions for better palliative care.

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